and 6B, the tail portion **470** may be used to move the first member **375** further into the contracted state, thereby allowing release of the first member **375** from the aperture **220** of the handheld computer **100**.

Using Embodiments of this Invention

This invention allows the handheld computer **100** to be coupled with the accessory device **110** in a swift and secure manner. Under an embodiment, the handheld computer **100** is slid along the front face of the accessory device **110** so that the connector of the accessory device establishes electrical contact with the output or communications port of the handheld computer **100**. Features such as the alignment surfaces on the front face **262** of the accessory device **110** and/or the back face **212** of the handheld computer **100** facilitate alignment of the electrical connector with the port of the handheld computer **100**. By electrically connecting the connectors, the aperture **220** of the handheld computer **100** is aligned with the insertion coupling **250** of the accessory device **110**. The handheld computer **100** may then be pushed back so that the insertion coupling engages the aperture **220** to secure the handheld computer **100** with the accessory device **110**. The release member **334** on the front face **262** of the accessory device **110** may be used to release the insertion coupling from the handheld computer **100**.

Embodiments of this invention enable the handheld computer **100** to be secured with the accessory device **110** using two swift motions consisting of sliding the handheld computer **100** along the front face **262** of the accessory device **110** and then pushing the handheld computer **100** back to engage the insertion coupling **250**. A user can hold the handheld computer **100** and accessory device **110** in separate hands and move the handheld computer **100** or accessory device **110** in a manner that causes the two devices to secure to one another by manipulating the alignment of the two devices while bringing the hands together. Therefore, in contrast to previous devices, the user does not have to rotate the handheld computer, or to first let go of one of the devices to effectuate the coupling that retains the two devices together.

The mechanical coupling also provides a tactile response that signals the handheld computer **100** is secured with the accessory device **110**. The tactile response may be in the form of a "snap", corresponding to the first spring-biased member expanding inside the back face of the handheld computer **100**. This simplifies coupling the handheld computer **100** and accessory device **110**, and further avoids mishaps that may arise if the coupling between the handheld computer **100** and the accessory device **110** is unknowingly defective.

Conclusion

The foregoing description of various embodiments of the invention have been presented for purposes of illustration and description. It is not intended to limit the invention to the precise forms disclosed. Many modifications and equivalent arrangements will be apparent.

What is claimed is:

1. An accessory device for a handheld computer, the handheld computer including a front face having a display, a back face, a pair of opposing lateral edges defining a width of the handheld computer, and a top edge and a bottom edge defining a length of the handheld computer, wherein the accessory device comprises:

a front surface and a back surface, a pair of opposing lateral sides and a top edge and a bottom edge, the pair of opposing lateral sides defining a width of the accessory device, and the top edge and the bottom edge defining a length of the accessory device; and

a mechanical coupling for inserting into a back face of the handheld computer to detachably secure the front surface of the accessory device with the back face of the handheld computer.

2. The accessory of claim **1**, further comprising a connector separate from the mechanical coupling for providing communications between the accessory device and the handheld computer.

3. The accessory device of claim **1**, wherein the mechanical coupling is spring-biased to insert into the back face of the handheld computer.

4. The accessory device of claim **1**, wherein the mechanical coupling comprises:

a base secured to the front face of the accessory device; and

a first member extending from the base in a direction orthogonal to the front face and being slideable in a direction parallel to the front face, the first member being biased between an extended position and a contracted position, wherein the first member is adapted to be received in a slot of the back face of the handheld computer when in the contracted position.

5. The accessory device of claim **1**, wherein the first member includes an enlarged endpiece that is adapted to obstruct against an interior of the back face after the first member has been exposed to release into the expanded state within the handheld computer.

6. The accessory device of claim **1**, wherein the electrical connector is positioned on a bottom portion of the front surface to access an output port of the handheld computer positioned at or near the bottom edge of the handheld computer.

7. The accessory device of claim **1**, wherein the accessory device is dimensioned so that the width of the accessory device is less than the width of the handheld computer.

8. The accessory device of claim **1**, wherein the accessory device is dimensioned so that the width of the accessory device is within 90% of the width of the handheld computer.

9. The accessory device of claim **1**, wherein the accessory device is dimensioned so that at least two edges of the accessory device are contained within a perimeter equal to the dimensions of the handheld computer.

10. The portable computing assembly of claim **1**, wherein the accessory device is a modem device.

11. The portable computing assembly of claim **1**, wherein the accessory device is either a universal serial port device or a modem communication device.

12. The accessory device of claim **4**, wherein the mechanical coupling further comprises:

a retainer engaged with an opening of the front face of the accessory device, the retainer being moveable between an extended position distal to the front face of the accessory device and a depressed position proximal to the front face of the accessory device, the retainer being engaged with the first member to allow the first member to release into the extended state when the retainer is moved into the depressed position.

13. The accessory device of claim **4**, wherein a distal surface of the retainer includes a slit that retains the first member in the contracted state, and wherein the retainer and the first member are aligned so that upon the back face of the handheld computer depressing the retainer, the first member is engaged with an aperture on the back face of the handheld computer and then moved into the expanded state to secure the first member with the handheld computer.

14. The accessory device of claim **8**, wherein the width of the accessory device is 2.75 inches, and the width of the handheld computer is 3.0 inches.